

What is claimed is:

1. A composition of matter for treating a mammal afflicted with a disorder ameliorated by an increase in phagocytosis or ICAM-1 expression in appropriate cells, which comprises (a) a therapeutically effective amount of an agent that specifically increases phagocytosis or ICAM-1 expression, and (b) a pharmaceutically or cosmetically acceptable carrier.
2. A composition of matter for treating a mammal afflicted with a disorder ameliorated by a decrease in phagocytosis or ICAM-1 expression in appropriate cells, which comprises (a) a therapeutically effective amount of an agent that specifically decreases phagocytosis or ICAM-1 expression, and (b) a pharmaceutically or cosmetically acceptable carrier.
3. A composition of matter for preventing in a mammal a disorder ameliorated by an increase in phagocytosis or ICAM-1 expression in appropriate cells, which comprises (a) a prophylactically effective amount of an agent that specifically increases phagocytosis or ICAM-1 expression, and (b) a pharmaceutically or cosmetically acceptable carrier.
4. A composition of matter for preventing in a mammal a disorder ameliorated by a decrease in phagocytosis or ICAM-1 expression in appropriate cells, which comprises (a) a prophylactically effective amount of an agent that specifically decreases phagocytosis or ICAM-1 expression, and

(b) a pharmaceutically or cosmetically acceptable carrier.

5. The composition of claim 1 or 3, wherein the composition comprises an agent which activates the PAR-2 pathway.

6. The composition of claim 5, wherein the composition comprises an agent selected from the group consisting of SLIGRL, SAIGRL, SLIGKVD and a serine protease.

7. The composition of claim 6, wherein the agent is selected from the group consisting of SLIGRL, trypsin, thrombin and tryptase.

8. The composition of claim 2, or 4, wherein the composition comprises an agent which inhibits the PAR-2 pathway.

9. The composition of claim 2 or 4, wherein the composition comprises an agent selected from the group consisting of a soybean derivative and a serine protease inhibitor.

10. The composition of claim 9, wherein the agent is selected from the group consisting of soybean milk, soybean paste, Compound I, a trypsin inhibitor, a tryptase inhibitor, a thrombin inhibitor and STI. *soybean trypsin inhibitor*

11. The composition of claim 1, 2, 3 or 4, wherein the appropriate cells are PAR-2-expressing cells.

selected agent

12. The composition of claim 11, wherein the appropriate cells are selected from the group consisting of keratinocytes, fibroblasts, and professional phagocytes.
- 5 13. The composition of claim 12, wherein the appropriate cells are keratinocytes. *elkated*
- 10 14. The composition of claim 12, wherein the appropriate cells are fibroblasts.
- 15 15. The composition of claim 12, wherein the appropriate cells are professional phagocytes.
- 15 16. The composition of claim 1, 2, 3 or 4, wherein the disorder is selected from the group consisting of a skin disorder, an immune system disorder, an inflammatory disorder, a respiratory disorder, and a central nervous system disorder.
- 20 17. The composition of claim 16, wherein the disorder is a skin disorder. *elkated*
- 25 18. The composition of claim 16, wherein the disorder is an immune system disorder.
- 30 19. The composition of claim 16, wherein the disorder is an inflammatory disorder.
- 35 20. The composition of claim 16, wherein the disorder is a respiratory disorder.
21. The composition of claim 16, wherein the disorder is a central nervous system disorder.

22. The composition of claim 1, 2, 3 or 4, wherein the mammal is a human.

Sub B1 5 23. A method of increasing phagocytosis or ICAM-1 expression in a mammalian cell, comprising contacting the cell with an effective amount of an agent that specifically increases phagocytosis or ICAM-1 expression.

M.U. soybean milk 10 24. A method of decreasing phagocytosis or ICAM-1 expression in a mammalian cell, comprising contacting the cell with an effective amount of an agent that specifically decreases phagocytosis or ICAM-1 expression.

15 25. The method of claim 23, wherein the agent activates the PAR-2 pathway.

20 26. The method of claim 25, wherein the agent is selected from the group consisting of SLIGRL, SAIGRL, SLIGKVD and a serine protease.

25 27. The method of claim 26, wherein the agent is selected from the group consisting of SLIGRL, trypsin, thrombin and tryptase.

28. The method of claim 24, wherein the agent inhibits the PAR-2 pathway.

30 29. The method of claim 24, wherein the agent is selected from the group consisting of a soybean derivative and a serine protease inhibitor.

Sub B2 35 30. The method of claim 29, wherein the agent is selected from the group consisting of soybean

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milk, soybean paste, Compound I, a trypsin inhibitor, a trypase inhibitor, a thrombin inhibitor and STI.

- 5 31. The method of claim 23 or 24, wherein the mammalian cell is a PAR-2-expressing cell.
- 10 32. The method of claim 31, wherein the mammalian cell is selected from the group consisting of a keratinocyte, a fibroblast, and a professional phagocyte.
- 15 33. The method of claim 32, wherein the mammalian cell is a keratinocyte.
- 20 34. The method of claim 32, wherein the mammalian cell is a fibroblast.
35. The method of claim 32, wherein the mammalian cell is a professional phagocyte.
36. The method of claim 23 or 24, wherein the mammalian cell is a human cell.

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25 37. A method of treating a mammal afflicted with a disorder ameliorated by an increase in phagocytosis or ICAM-1 expression in appropriate cells, which comprises administering to the mammal a therapeutically effective amount of an agent that specifically increases phagocytosis or ICAM-1 expression.

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38. A method of treating a mammal afflicted with a disorder ameliorated by a decrease in phagocytosis or ICAM-1 expression in appropriate cells, which

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comprises administering to the mammal a therapeutically effective amount of an agent that specifically decreases phagocytosis or ICAM-1 expression.

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39. A method of preventing in a mammal a disorder ameliorated by an increase in phagocytosis or ICAM-1 expression in appropriate cells, which comprises administering to the mammal a prophylactically effective amount of an agent that specifically increases phagocytosis or ICAM-1 expression.

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40. A method of preventing in a mammal a disorder ameliorated by a decrease in phagocytosis or ICAM-1 expression in appropriate cells, which comprises administering to the mammal a prophylactically effective amount of an agent that specifically decreases phagocytosis or ICAM-1 expression.

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41. The method of claim 37 or 39, wherein the agent activates the PAR-2 pathway.

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42. The method of claim 41, wherein the agent is selected from the group consisting of SLIGRL, SAIGRL, SLIGKVD and a serine protease.

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43. The method of claim 42, wherein the agent is selected from the group consisting of SLIGRL, trypsin, thrombin and tryptase.

44. The method of claim 38 or 40, wherein the agent inhibits the PAR-2 pathway.

45. The method of claim 38 or 40, wherein the agent is selected from the group consisting of a soybean derivative and a serine protease inhibitor.

5 46. The method of claim 45, wherein the agent is selected from the group consisting of soybean milk, soybean paste, Compound I, a trypsin inhibitor, a trypsin inhibitor, a thrombin inhibitor and STI.

10 47. The method of claim 37, 38, 39 or 40, wherein the appropriate cells are PAR-2-expressing cells.

15 48. The method of claim 47, wherein the appropriate cells are selected from the group consisting of keratinocytes, fibroblasts, and professional phagocytes.

20 49. The method of claim 48, wherein the appropriate cells are keratinocytes.

50. The method of claim 48, wherein the appropriate cells are fibroblasts.

25 51. The method of claim 48, wherein the appropriate cells are professional phagocytes.

30 52. The method of claim 37, 38, 39 or 40, wherein the disorder is selected from the group consisting of a skin disorder, an immune system disorder, an inflammatory disorder, a respiratory disorder and a central nervous system disorder.

35 53. The method of claim 52, wherein the disorder is a skin disorder.

54. The method of claim 52, wherein the disorder is an immune system disorder.
- 5 55. The method of claim 52, wherein the disorder is an inflammatory disorder.
56. The method of claim 52, wherein the disorder is a respiratory disorder.
- 10 57. The method of claim 52, wherein the disorder is a central nervous system disorder.
- 15 58. The method of claim 37, 38, 39, or 40, wherein the mammal is a human.
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- 20 59. An article of manufacture for administering to a mammal the composition of matter of claim 1, 2, 3 or 4, comprising a solid delivery vehicle having the composition operably affixed thereto.
- 25 60. The article of claim 59, wherein the composition comprises an agent which activates the PAR-2 pathway.
- 30 61. The article of claim 60, wherein the composition comprises an agent selected from the group consisting of SLIGRL, SAIGRL, SLIGKVD and a serine protease.
62. The article of claim 61, wherein the agent is SLIGRL.

63. The article of claim 59, wherein the composition comprises an agent which inhibits the PAR-2 pathway.
- 5 64. The article of claim 59, wherein the composition comprises an agent selected from the group consisting of a soybean derivative and a serine protease inhibitor.
- 10 65. The article of claim 64, wherein the agent is selected from the group consisting of soybean milk, soybean paste, Compound I, a trypsin inhibitor, a trypsin inhibitor, a thrombin inhibitor and STI.
- 15 66. A method of administering a therapeutic, prophylactic or cosmetic compound to a mammal, comprising administering to the mammal (a) the compound and (b) a composition of matter
- 20 comprising a pharmaceutically or cosmetically acceptable carrier and an agent that specifically increases phagocytosis in an amount sufficient to increase phagocytosis in cells where uptake of the compound is desired, wherein the composition is
- 25 administered prior to and/or concurrently with the administration of the compound.
67. The method of claim 66, wherein the composition comprises an agent which activates the PAR-2
- 30 pathway.
68. The method of claim 67, wherein the composition comprises an agent selected from the group consisting of SLIGRL, SAIGRL, SLIGKVD and a serine
- 35 protease.

69. The method of claim 68, wherein the agent is
SLIGRL.

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